

ABSTRACT OF THE DISCLOSURE

A method of forming a mixed fiber mat comprising forming a multi-layer mat from a first continuous strand glass fiber mat and a first layer of thermoplastic fibers, such as polypropylene fibers. The multi-layer mat is subsequently needle-punched to intertwine the fibers. The mixed fiber mat comprises a first continuous strand glass fiber mat and a first layer of thermoplastic fibers needle-punched together to intertwine the fibers. The mixed fiber mat can be heated to melt the thermoplastic fibers and then cooled to harden the thermoplastic to form a matrix. A composite is formed by this heating and cooling process.